

WHAT IS CLAIMED IS:

1. An apparatus for applying a coating to an elongated member, comprising:
a coating unit having a sizing die with an orifice through which said elongated
member is conveyed, the diameter said orifice being adjustable.
2. The apparatus of claim 1, wherein sizing die includes a helical spring that
defines said orifice.
3. The apparatus of claim 2, further comprising a tensioning mechanism for
adjusting the tension of said spring by causing relative rotation between opposite ends of said
spring to change the diameter of said orifice.
4. The apparatus of claim 3, wherein said sizing die includes first and second
portions respectively having first and second through-holes in which said spring is disposed,
wherein one end of said spring is attached to said first portion and an opposite end of said
spring is attached to said second portion, said first and second portions be rotatable with
respect to each other and corresponding to said tensioning mechanism.
5. The apparatus of claim 1, wherein said elongated member is an optical
fiber.
6. The apparatus of claim 1, wherein said elongate member is a conductive
member.
7. The apparatus of claim 1, further comprising:
a measuring device, disposed downstream of said coating unit, for measuring
the diameter of said coating; and
a controller for adjusting the diameter of the orifice in response to the
measured diameter of said coating.
8. The apparatus of claim 4, further comprising:
a measuring device, disposed downstream of said coating unit, for measuring
the diameter of said coating; and
a controller for controlling relative rotation between said first and second
portions in response to the measured diameter of said coating.

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9. The apparatus of claim 7, wherein said elongated member is an optical fiber.
 10. The apparatus of claim 8, wherein said elongated member is an optical fiber.
 11. The apparatus of claim 4, wherein said first portion is disposed upstream of said second portion and wherein said first through hole has a conical shape.
 12. A method of applying a coating to an elongated member, comprising the following steps:

passing the elongated member through a coating unit having a sizing die with an adjustable orifice for controlling an amount of coating applied to the elongated member;

measuring a diameter of the coated elongated member;

determining whether the measured diameter is within a target range;

adjusting a diameter of said orifice when it is determined that the measured diameter is outside the target range.

13. The method of claim 12, wherein said passing step includes the step of passing an optical fiber through said coating unit, said optical fiber corresponding to said elongated member.

14. The method of claim 13, wherein said orifice is defined by a helical spring provided in said sizing die.

15. The method of claim 14, wherein said adjusting step includes the step of adjusting the tension of said spring.

16. The method of claim 15, wherein said adjusting step includes the step of rotating one end of said spring relative to an opposite end of said spring.

17. A method of applying a coating to an elongated member, comprising the following steps:

passing the elongated member through a coating unit having a sizing die with an adjustable orifice for controlling an amount of coating applied to the elongated member;

measuring a thickness of the coating applied to the elongated member;

determining whether the measured thickness is within a target range;

adjusting a diameter of said orifice when it is determined that the measured thickness is outside the target range.

18. The method of claim 17, wherein said passing step includes the step of passing an optical fiber through said coating unit, said optical fiber corresponding to said elongated member.

19. The method of claim 18, wherein said orifice is defined by a helical spring provided in said sizing die.

20. The method of claim 20, wherein said adjusting step includes the step of adjusting the tension of said spring.

21. The method of claim 20, wherein said adjusting step includes the step of rotating one end of said spring relative to an opposite end of said spring.